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AUTHOR McInerney, Dennis M.

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ABSTRACT

This paper reports on a series of studies that examine the multidimensional nature of achievement motivation across a number of cultural groups, the determinants of this achievement motivation, and the relationship of achievement motivation to criteria of school success, such as attendance, retention, achievement, further education, and occupational choice. These studies, conducted over 15 years, have had large samples of high school students: (1) 496 Aboriginal students; (2) 1,173 Anglo Australian students; (3) 487 Australian students of immigrant background; (4) 919 Navajo students; (5) 141 Arabic-background Australian students; (6) 198 Betsiamite (Canadian Indians) students; (7) 1,078 Anglo American students; and (8) 80 Yavapai students. A focus of the paper is an examination of the multi-method approaches used to ensure the cultural validity and reliability of the information obtained, especially the etic-emic (a model which effectively reflected key variables determined in presurveying and interviewing to be relevant to the groups being studied) considerations important in such research. Among the range of techniques used are focus group interviews, individual interviews, open-ended surveys, observations, field work, and closed survey instruments. Analysis techniques included exploratory and confirmatory factor analysis, multivariate analysis of variance, multiple regression analysis, discriminant analysis, content analysis, and non-numerical unstructured data indexing searching and theorizing (NUD.IST) analyses. Overall, findings suggest that the motivational profiles of the diverse groups participating are more similar than different, and that only a narrow range of goals and sense of self variables is important in explaining school achievement on educational criteria, and that these are similar across all the groups. (Contains 3 figures and 43 references.) (SLD)

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Multidimensional aspects of motivation in cross-cultural settings and ways of researching this

Paper presented at the American Educational Research Association
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Dennis M McInerney
University of Western Sydney, Macarthur
PO Box 555 Campbelltown, 2560, NSW, Australia
d.mcinerney@uws.edu.au

Abstract

School motivation and achievement for an individual is the product of a complex set of interacting forces which include the individual's conception of what is appropriate, what other people pressure him or her to do, how much he or she enjoys or dislikes the behavior, what consequences are seen to be connected with the behavior, and how much these consequences are valued. Social and cultural norms, values and beliefs impact on these and help determine an individual's norms, values and beliefs. As such, this interplay of various forces will be differential for individuals and across social and cultural groups.

This paper reports on a series of studies which examine the multidimensional nature of achievement motivation across a range of cultural groups, the determinants of this achievement motivation, and the relationship of achievement motivation to criteria of school success, such as attendance, retention, achievement, further education and occupational choice.

A focus of the paper will be an examination of the multi-method approaches used to ensure the cultural validity and reliability of the information obtained, in particular, the paper pays special attention to the etic-emic considerations important in such research. Among the wide range of techniques used are: focus group interviews, individual interviews, open-ended surveys, observations, field work, and closed survey instruments. Analysis techniques include exploratory and confirmatory factor analysis, multivariate analysis of variance, multiple regression analysis, discriminant analysis, content analysis and Non-numerical Unstructured Data Indexing Searching and Theorizing (NUD.IST) analyses.

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Educational research among indigenous minority peoples has often been flawed. Many studies on achievement motivation, cognitive development, and learning styles failed to establish that the behaviours and responses being measured were functionally, conceptually or metrically equivalent to those from which norms for comparison were drawn, and that the constructs and tools used were culturally appropriate. Earlier psychometric research was often so narrowly focused on measuring the status of indigenous groups against Western norms that the importance of investigating other culturally relevant aspects was neglected. As a consequence psychometric research (especially that carried out by outsiders) fell into disfavour and disrepute among many indigenous minority groups.

In this paper I wish to describe, first, a use of psychometric research for eliciting culturally valid and useful information for indigenous minority communities. Second, I also wish to discuss the usefulness of qualitative research to give depth to the quantitative research. By referring to my continuing research with indigenous minority communities I will demonstrate a methodology used to ensure that the communities have ownership of the research, and how psychometrics, together with carefully designed qualitative research can be a valuable and indeed essential tool in understanding important educational issues for indigenous minorities.

Indigenous motivation and academic achievement

Children from indigenous cultural communities (such as Aboriginal Australians and Native Americans) appear to be at a particular disadvantage with regard to academic achievement and school retention. Many beliefs about indigenous minority motivation in school settings are based upon little more than folk loric tradition passed on from teacher to teacher. Huffman, Sill and Brokenleg (1986, p.32) referring to Indian Americans state that "Earlier studies have offered a variety of explanations for the low academic achievement among Native Americans. Most common among these explanations have been inadequate primary and secondary education, low achievement motivation, low competition motivation, and low family value on education." It is also commonly thought that mainstream schools and teachers value mastery, future time orientation, competition and success, individuality and aggression, while their pupils, in contrast, value harmony, present time orientation, maintenance of the status quo, anonymity, and submissiveness (Duda, 1980, Platero, et al, 1986; Tippeconnic, 1983). Similar explanations are used to explain the poor performance of Australian Aboriginal students (McInerney, 1991a). Indigenous minority children are, therefore, often stereotyped as lacking the motivation to achieve and the cognitive processes needed to achieve. It is also believed that they come from homes which lack the socialization practices needed to inculcate achievement values in children. As a result these children suffer culture clash which predisposes many to drop out from school.

While these factors may have an impact on the motivation and performance of indigenous students in mainstream school settings, and on their desire to complete schooling, there are inadequate research data available on many of these variables. Little hard data exists to guide communities, schools and teachers in the development of programs to improve the academic achievement of these indigenous students.

In past years psychometric and other research, which might have generated the needed "hard data", has fallen into disrepute among indigenous minorities, largely as a result of two factors. First, many cultural minorities desire to repossess their intellectual capital, that is, they desire to have ownership of research within their communities. Research , and psychometric research in particular, has become identified with white researchers and "outsiders" and as such is often looked upon unfavourably (see, for example, the debate between Williamson, 1997ab and Makata, 1997, also Scheurich, 1997). Second, poorly developed psychometric research studies, which failed to be culturally sensitive, did not produce data and interpretations that were able to be validly applied to explain minority educational performance and underachievement. Very often these psychometric models of research resulted in findings which seemed to blame the victim. Better models of research were needed (McInerney, 1991ab, 1992, 1994, 1995; McInerney, McInerney & Roche, 1994 McInerney, Roche, McInerney, Marsh, 1997; McInerney & Sinclair, 1992, McInerney & Swisher, 1995)

Etic-emic considerations and psychometric research

The evidence that cultural groups within many social settings (such as employment and schooling) appear to be motivated by different forces has intrigued psychologists, sociologists and anthropologists for many years (Pederson, 1979) and has stimulated the search for better models to guide cross cultural research (Berry, 1980; Duda, 1981; McClelland, 1961; Maehr, 1984; Triandis, 1980). The research literature is rich with case studies, ethnographies, surveys and experimental studies on a vast range of cultural groups based on these and other models. Each of these models presents some notion of what motivation and motivated behavior is in particular contexts. The notion of motivation, is however, difficult to operationalize in cross-cultural settings if one is restricted to a generalized universal construct on one extreme (i.e., where everyone is presumed to be motivated by the same forces irrespective of cultural background), or a particularistic view, at the other extreme (i.e., where motivation is seen to be culture specific, and there are no generalities) (Brislin, 1983; Lonner, 1980; Van de Vijver & Poortinga, 1982). The dilemma of examining what are universal qualities of motivation (thereby allowing some comparison across groups) and what are culturally specific qualities (thereby paying specific attention to the individuality of groups) has been termed the etic-emic dilemma in cross-cultural

research (Church & Katigbak, 1988a, 1988b; Davidson, Jaccard, Triandis, Morales & Diaz-Guerrero, 1976; Davidson & Thomson, 1980; Segal, 1986).

One danger inherent in using a psychometric approach is that an assumption may be made by researchers that items and constructs developed and standardized on one particular cultural group are etic, that is, broadly universal when in fact there is no attempt made to demonstrate the applicability of the constructs or instruments used to new groups. A second danger inherent in using a psychometric approach is the potential inability of an instrument designed to measure general constructs (the so-called etic dimensions) to generate culturally specific information (the so-called emic dimensions) to particularize etic constructs within a specific cultural group.

Psychometric studies conducted within educational settings must attempt to resolve this etic-emic dilemma. The following figures illustrate my conception of the interplay between these two dimensions of research.

Figure 1

A Search of common elements by examining the subjective meaning of achievement cross-culturally.

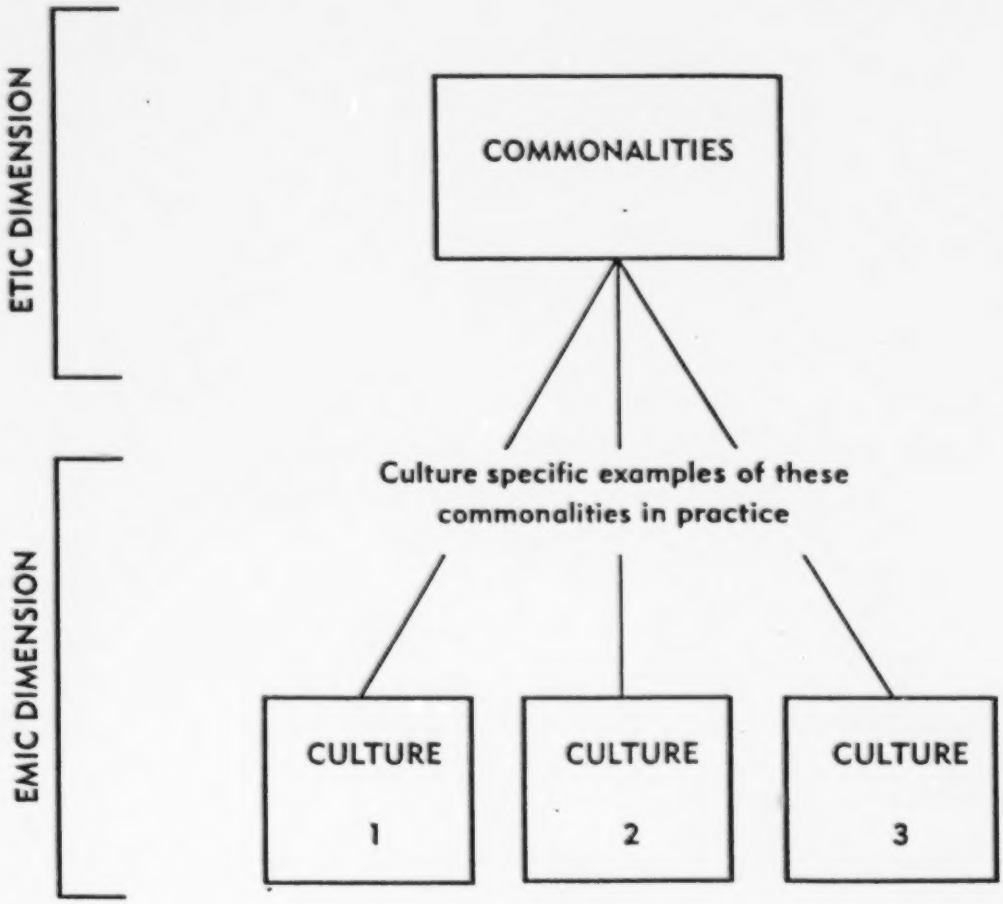


Figure 2. The relationship between etics and emics in educational research

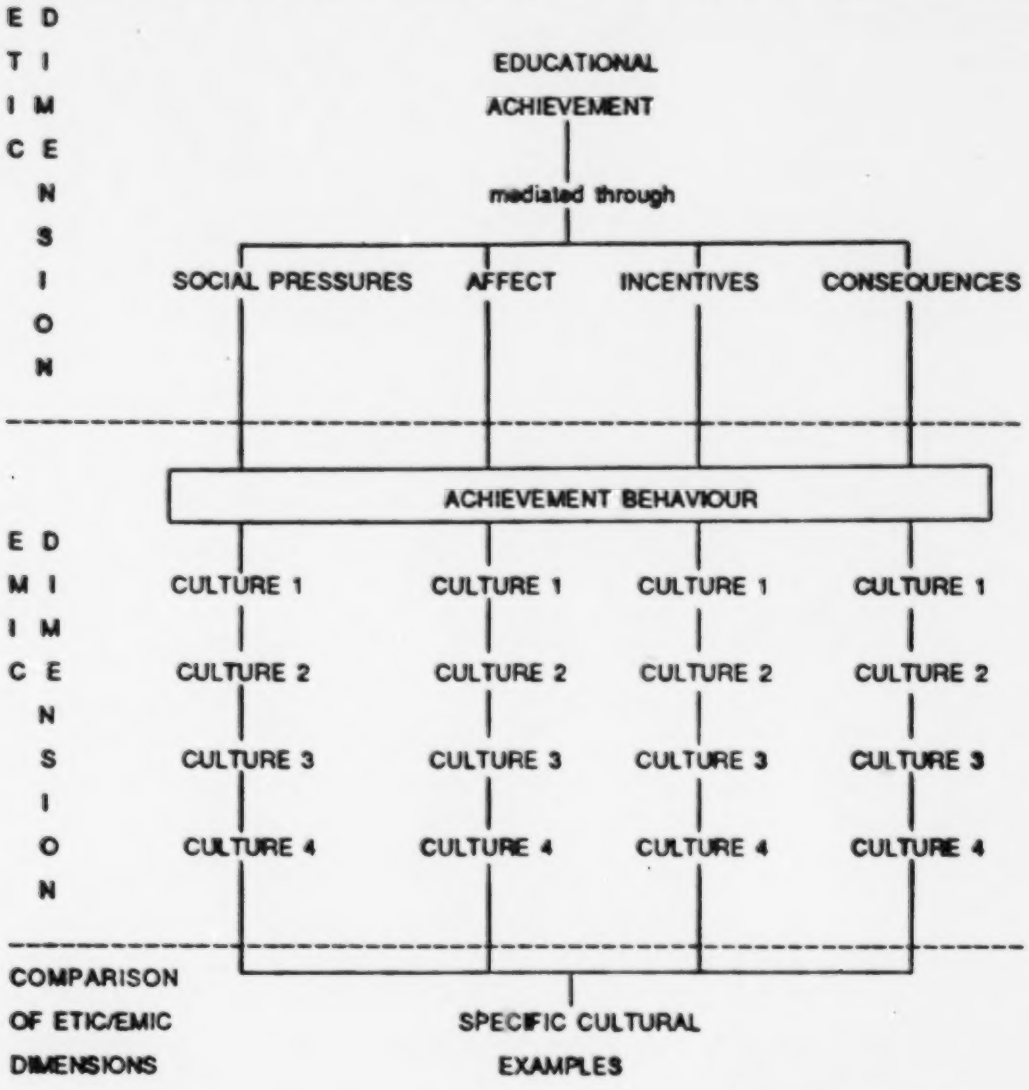


Figure 2

Illustrating the combined etic-emic model

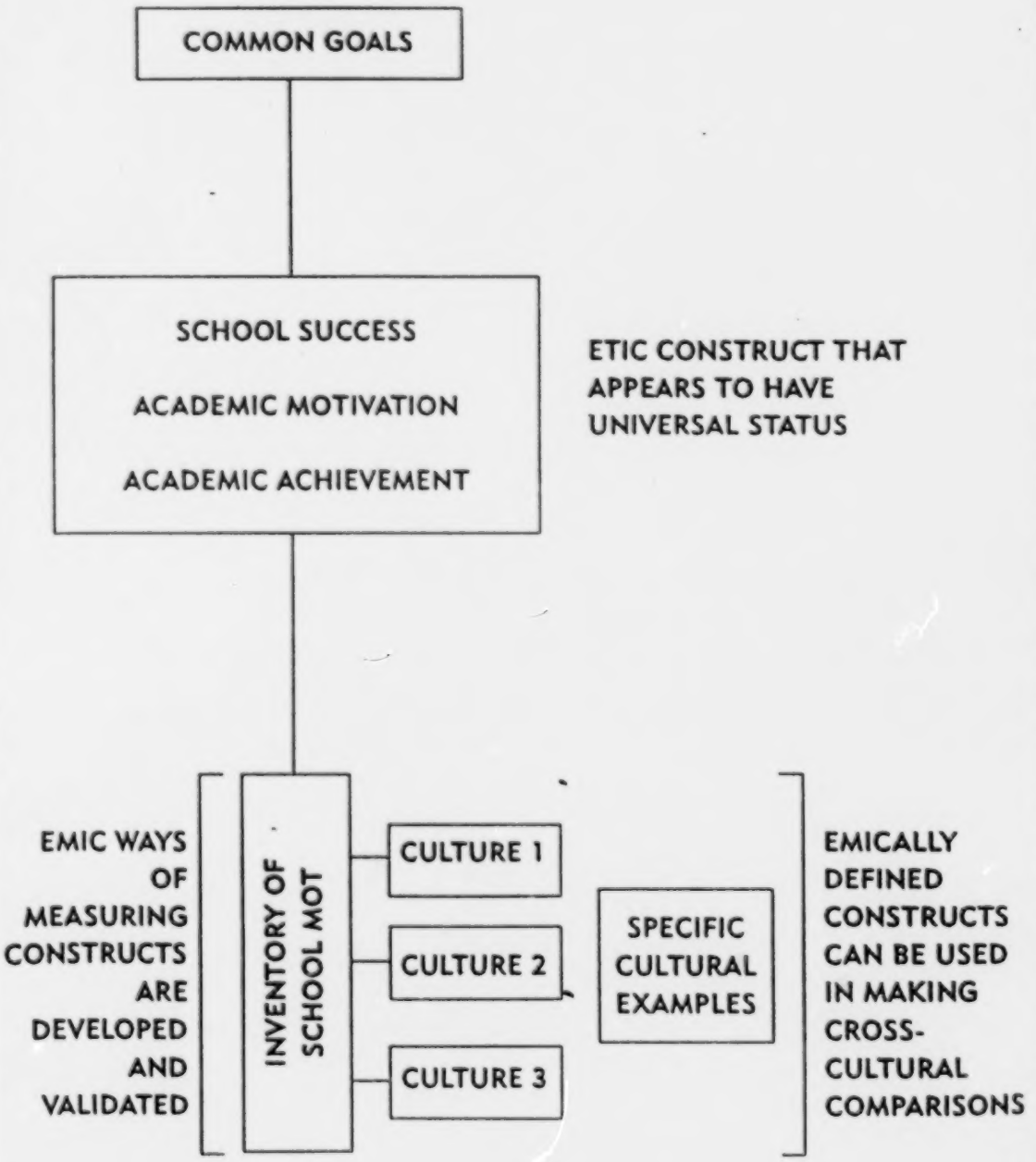
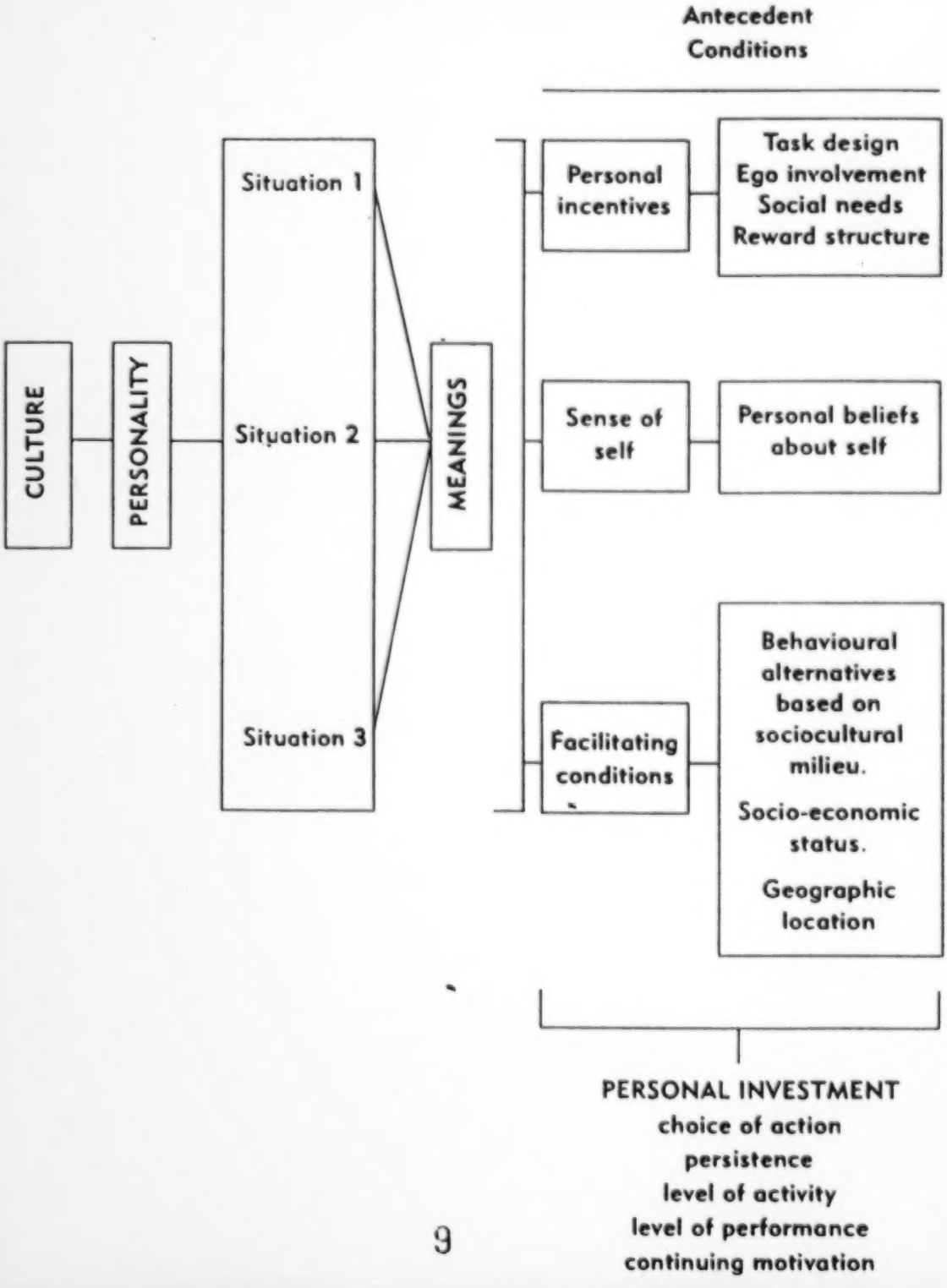

COMMON GOALS
SCHOOL SUCCESS
ACADEMIC MOTIVATION
ACADEMIC ACHIEVEMENT
ETIC CONSTRUCT THAT APPEARS TO HAVE UNIVERSAL STATUS
EMIC WAYS OF MEASURING CONSTRUCTS ARE DEVELOPED AND VALIDATED
INVENTORY OF SCHOOL MOT
CULTURE 1
CULTURE 2
CULTURE 3
SPECIFIC CULTURAL EXAMPLES
EMICALLY DEFINED CONSTRUCTS CAN BE USED IN MAKING CROSS-CULTURAL COMPARISONS

Figure 3

Antecedents and consequents of personal investment



The first figure represents the general interaction that might characterise emic-etic research which seeks to elicit information that is both specific to each group, but which allows for some valid comparisons to be made across groups. The second figure shows this relationship in an educational context, specifically looking at educational achievement. It would appear that educational achievement is a universal value. Many documents attest to the fact that communities world wide look to education as a means of sociocultural, economic and political improvement. It is also reasonable to argue that educational achievement is mediated by a range of important variables such as the *social pressures* emanating from the child's community (in other words, who influences the individual and defines what is important or valued in educational achievement, and who validates the achievement), the *affect* the child has towards schooling (in effect, how much one is expected or needs to like the process), the *incentives* that apply (for example., the nature of the reward and punishment systems that are used as sanctions and their relative importance), and, finally the nature of the *consequences* of academic success, how these are viewed and valued. Each of these factors - social, affect, incentives, and consequences - while etic in nature are presumed to reflect the particular sociocultural environment of students and hence, achievement behavior and its determinants may vary across groups. For example, some groups may be individualistic and competitive, while others may be cooperative and group-oriented. The style of motivation and level of motivation and decision-making is also relevant here. This, then, raises the necessity to obtain specific emic information on each of these determining factors.

Typical indexes of achievement behaviour are GPA, college entrance, attendance, behavior, intention to complete schooling, further education and occupational choices. Again, these measures capture elements of school achievement that are thought to be broadly relevant across all groups, but they may not all be relevant and may not capture elements that are specific to particular groups. It might be, for example, that the criterion of school achievement for some individuals or groups may be the preservation of group affiliation and the coordinated success of the group. This criterion would not be picked-up in many of the measures of school success we currently use. Hence at the level of outcome measures we also need to be sensitive to emic-etic issures.

The research program I have undertaken over the last 15 years had therefore a blueprint. First, it was necessary to demonstrate that the variables specified by the motivation models used were indeed etic i.e., were broadly relevant to each group surveyed, otherwise no comparisons could be made, and second, it was necessary to elicit from the groups being surveyed the emic nature of the components of these etic variables, i.e., the particular characteristics of these variables as they applied to each group.

The third figure presents the model that guided much of my work in this area and is described in some detail below.

Method

Instruments

Community surveys. At the outset I gathered qualitative data on how members of the various indigenous communities participating in the research conceptualized education and what they perceived as major issues in the underachievement of their children in school settings. The data were obtained in three ways: personal interviews and focus group discussions with members of the communities; written survey forms, and an examination of existing reports relating to the area of inquiry. In each case a consultative committee, made up of members of the cultural group, was established to oversee the research. The psychometric instruments developed for the research were consistent with the themes regarded as relevant by these community members.

A very important strategy was to include research assistants from the local communities, who not only facilitated the access of the researcher to community groups, but who also contributed to the research by their clarification of issues raised by the respondents.

This qualitative research established the etic validity of the motivational constructs utilised in the various studies.

The Inventory of School Motivation (ISM). The specific model used to guide the motivational studies was derived from Maehr's Personal Investment model (Maehr & Braskamp, 1986), a model posited to satisfy both etic and emic demands. The Inventory of School Motivation (ISM) was devised to reflect components of this model and to investigate the nature of school motivation in cross cultural settings (McInerney, 1988, McInerney & Sinclair, 1991, 1992; McInerney, Roche, McInerney, Marsh, 1997). The Inventory is broad enough to reflect the etic dimensions of the model in a variety of cultural settings. Inventory questions relate to the following dimensions of the Personal Investment Model, each of which has two components: **Sense of Self**: sense of competence (e.g., I can do things as well as most people at school), sense of purpose (e.g., it is good to plan ahead to complete my schooling); **Ego**: competitiveness (e.g., winning is important to me), group leadership (e.g., I often try to be the leader of a group); **Extrinsic**: recognition (e.g., having other people tell me that I did well is important to me), token rewards (e.g., getting merit certificates would make me work harder at school); **Social Solidarity**: social concern (e.g., it is very important for students to help each other at school), affiliation (e.g., I try to work with friends as much as possible at school); **Task**: task involvement (e.g., the more interesting the school work the harder I try), and striving for excellence (e.g. I try hard to make sure that I am good at my schoolwork).

The samples

The motivational studies conducted have large sample sizes including 496 Aboriginal students, 1173 Anglo Australian students, 487 Immigrant-background Australian students, 919 Navajo students, 141 Arabic-background Australian students, 198 Betsiamite students, 1078 Anglo American students, and 80 Yavapai students. The students were drawn from broadly equivalent grades in High Schools teaching mainstream curricula.

Research strategy

Broadly, the following research strategy was used to guide the research:

1). Design an instrument based on the theoretical etic-emic model which effectively reflected key variables determined in presurveying and interviewing to be relevant to the groups being studied;

2). Factor analyse the instrument (principal factor analysis) separately for each group, targeting the motivational dimensions to determine the construct validity of the scales for each group and to determine the reliability of the scales (in effect, to establish the etic nature of the global variables and the emic content of the scales);

3). Use the derived scales as predictor variables in multiple regression analyses and discriminant analyses against a range of educationally relevant criterion variables (including school confidence, perceived value of school, affect to school, desired occupation, school achievement, and absenteeism);

4). Determine the most salient variables within each group separately, and to draw comparisons across groups.

A major function of these analyses was to demonstrate the relationship between the predictor variables derived from the factor analyses of the ISM and the criterion variables within each group and to illustrate any cultural similarities and differences in the relative importance of the predictor variables. Comparisons between the groups are therefore not based on mean scores derived from overall analyses of the instruments combining the full sample, as this would have presumed that all items were equally relevant to each group. Separate factor analyses for each group established which items were most relevant for later analyses. The results of the separate factor analytic studies are reported in McInerney, 1990, 1992, 1993; McInerney & Sinclair, 1991, 1992; McInerney & Swisher, 195).

Because of the nature of these exploratory analyses the derived scales reflected the particular weightings given to items in each group. So, while the scales had core items in common, they also had items which loaded idiosyncratically for each group. These "idiosyncratic" items were retained in the scales for the particular group.

As a more recent refinement on this approach I have used confirmatory factor analysis to derive common scales (i.e., scales that are defined by the same set of items) across the range of

groups participating in the research (McInerney, Roche, McInerney, Marsh, 1997). This maximises the strengths of the emic and etic approaches and allows for direct comparisons between the groups using MANOVA.

Qualitative analyses. These psychometric studies provide information on students' motivation, and in particular, salient goals related to their school achievement. However, these studies did not examine the genesis of the achievement goals students held, whether these goals changed over time, and if so how, whether there was a movement from traditional cultural values to Westernised values as students moved through a Westernised school setting, or whether some students maintained traditional goals and values while others combined the traditional and Western. In other words, these earlier studies did not consider the *ontological or change processes* in goal formation. A consideration of the change process forms an important component of my more recent studies, and allows for further investigation of the emic levels of motivation. In particular, the qualitative research investigates 1. How beliefs, values and goal orientations are formed., 2. Whether students who hold specific beliefs, values and goal orientations (e.g., mastery, performance, social) maintain these regardless of the environments in which they find themselves, 3. Whether there is a perception of having made a choice or commitment to particular beliefs, values and goal orientations, 4. The coping strategies used by students to sustain their beliefs, values and goal orientations in a variety of settings including the school, or whether they experience conflict and change their strategies, 5. Whether beliefs, values and goal orientations and strategy use are stable across domains (achievement, social, etc.) and over time, 6. The salience of different contexts (family, peers, school, community) at different times, and 7. How beliefs, values and goal orientations, or changes in these, as well as the cultural/social influences in their lives, affect school motivation and achievement.

In order to gain these extra levels of understanding qualitative research was conducted (initially with Navajo and Yavapai communities) through individual semi-structured interviews. Through the use of an in-depth semi-structured interview format a richer understanding of important issues was gained: How students from Navajo and Yavapai backgrounds interpret themselves and their world; their affective reactions to schooling, what they consider of primary and secondary significance; and, how they build connections between life events which influence their sense of self, achievement and motivation within school settings. This more holistic approach provided important clues to understanding the process of adopting and maintaining/rejecting particular goal and value orientations within the school context, as well as the cognitive and affective factors involved.

These interviews were recorded and each of the tape recorded interviews was transcribed and content analysed using the NUD.IST (Non-numerical Unstructured Data Indexing Searching and Theorizing) program. The NUD.IST program was selected as appropriate for this qualitative data as it assists in the management of a thorough and systematic analysis of large quantities of qualitative

data. Preserving the naturalistic quality of the data was of paramount concern, therefore the transcripts were only minimally edited.

Following this editing process, key concepts (nodes) emerging from the data were constructed as a 'tree' which allowed for detailed conceptual linking of related phrases or concepts through indexing and coding of each text (interview) according to these nodes. Text was then examined and indexed to one or more of these concepts (nodes) to facilitate further analysis.

Overview of Findings

Quantitative studies

The findings from this series of studies suggest that the motivational profiles of the diverse groups participating are more similar than different; that only a narrow range of goals and sense of self variables is important in explaining school achievement on educational criteria, and that these are similar across all the groups; and that key variables used to distinguish Western and indigenous groups (such as affiliation and social concern) do not appear to be salient in the school contexts studied (McInerney, Roche, McInerney & Marsh, 1997; McInerney & Swisher, 1995; McInerney, 1992; McInerney, 1991b)

Qualitative studies

To this point in time I am progressing with the Navajo analyses. While in previous research, issues of cultural differences between Navajo and Western values towards formal education have been the focus, preliminary findings from the present investigation shows that compatability on many fundamental educational values actually exists. For example, the valuing of schooling and the overwhelming importance accorded to parents, their positive attitude to education, and subsequent supportive behavior was marked. It is clear from the interviews that the most important influence on school motivation was the family. Teachers were rated the second most important, and peers were the third. Other factors, such as the relevance of the curriculum, and opportunity for employment were also significant but to a lesser extent. The same goals and sense of self variables that were found to be significant predictors of educational success in the psychometric studies were also considered very important in these qualitative analyses (McInerney, McInerney, Ardington & Bazeley, 1998; McInerney, McInerney, Ardington & De Rachelwiltz, 1997).

This qualitative research is currently being extended to Anglo American, Yavapai, Australian Aboriginal, Anglo Australian, Arabic Australian and Vietnamese Australian participants.

Final note

In general, there is a very strong convergence between the findings of the psychometric quantitative and qualitative studies, effectively blending the etic and emic approaches. However, the interviews

also revealed that traditional Navajo values such as a sense of community, the sense of duty, obligation to give something back to the family, and the community as a whole, still retain great significance among all the interviewees spanning three generations. Many of the views expressed demonstrate the ongoing struggle to reconcile traditional Navajo values with the practice of education in which alternative and sometimes competing values are seen to have a place. Without effective emic research these later conflicts of values may not have been discovered.

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